

REMARKS

The final Office Action of April 20, 2007, has been received and reviewed.

Claims 1-44 are currently pending and under consideration in the above-referenced application. Of these, claims 1-20 and 31-44 have been allowed and claim 22 is directed to allowable subject matter, while claims 21 and 23-30 stand rejected.

It is proposed that independent claim 21 be amended and that claim 22 be canceled. These revisions are proposed without prejudice or disclaimer to any subject matter that may be surrendered by their entry.

Reconsideration of the above-referenced application is respectfully requested.

Rejections under 35 U.S.C. § 102

Claims 21 and 23-30 are rejected under 35 U.S.C. § 102(b) for being drawn to subject matter that is allegedly anticipated by the subject matter described in U.S. Patent 5,960,125 to Michael et al. (hereinafter "Michael").

A claim is anticipated only if each and every element, as set forth in the claim, is found, either expressly or inherently described, in a single reference which qualifies as prior art under 35 U.S.C. § 102. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The description of Michael relates to machine vision systems. The machine vision system described in Michael includes a motion stage 15 for "translating and rotating [an] object." Col. 5, lines 41-43; FIG. 1. "[T]ranslation and rotation of the motion stage **15**" and, thus, of an object 12 on the motion stage 15 may be controlled by an image analysis system 20. Col. 5, lines 59-63. A calibration target 14 may be coupled to the object 12 to facilitate calibration of the machine vision system. Col. 6, lines 4-67.

Michael also describes a variation of the machine vision system in which a calibration target 44 appears directly on a motion stage 42. Col. 8, lines 6-36; FIG. 4.

While Michael discloses a machine vision system, there is no express or inherent description in Michael of "a selective material consolidation system," as is required of the

programmable material consolidation system of independent claim 21. Further, Michael includes no express or inherent description of a selective material consolidation system that includes “a selectively moveable element to effect formation of an object on at least one of [a] support element and a substrate positioned on the support element,” as is required of the selectively material consolidation system of independent claim 21. Instead, the disclosure of Michael is limited strictly to machine vision systems for viewing objects and to apparatus and techniques for calibrating the disclosed machine vision systems.

It is, therefore, respectfully submitted that Michael does not anticipate each and every element of independent claim 21, as would be required to maintain the 35 U.S.C. § 102(b) of that claim.

Claims 23-30 are each allowable, among other reasons, for depending directly or indirectly from independent claim 21, which is allowable.

Claim 24 is additionally allowable since Michael does not provide any express or inherent description of at least one fiducial mark for providing a reference point for a machine vision system. Instead, the disclosure of Michael is limited to calibration targets that facilitate the calibration of different cameras of a machine vision system with one another.

Claim 25 is further allowable because Michael includes no express or inherent description of a magnification element associated with a locationally stationary camera. Rather, the description of Michael with respect to magnification is limited to the use of “magnification invariable” calibration targets. Col. 8, lines 6-16.

Claim 26, which depends from claim 25, is also allowable since Michael includes no express or inherent description of an apparatus that includes a magnification element that optically magnifies an image.

Claim 27 also depends from claim 25, and is further allowable because Michael neither expressly nor inherently describes a magnification element that digitally magnifies an image.

Claim 28 is additionally allowable because Michael lacks any express or inherent description of a rotational element associated with a locationally stationary camera. Michael merely discloses that cameras of a machine vision system may be oriented toward a motion stage 15, 42 that rotates.

Claim 30 is further allowable since Michael does not expressly or inherently describe a programmable material consolidation apparatus with at least one control element that is “configured to cause a selective material consolidation system to effect fabrication of one or more objects at a precise location . . . based on a location of at least one feature viewed by the machine vision system.”

In any event, it is proposed that independent claim 21 be amended to include the subject matter recited in claim 22, which the Office has indicated to be allowable over the subject matter described in Michael. The revision of independent claim 21 is requested merely to advance prosecution of the above-referenced application, and in no way indicates acquiescence to the Office’s rejection of independent claim 21 or claims 23-30 depending therefrom.

Withdrawal of the 35 U.S.C. § 102(b) rejections of claims 21 and 23-30 is respectfully solicited, as is the allowance of each of these claims.

Allowable Subject Matter

The allowance of claims 1-20 and 31-44 and the indication that claim 22 recites allowable subject matter are noted with appreciation. It is proposed that the subject matter recited in claim 22 be incorporated into independent claim 21 to advance prosecution of the above-referenced application.

Entry of Amendments


Entry of the proposed amendment to independent claim 21 is respectfully solicited. It is respectfully submitted that the proposed revision to independent claim 21 does not introduce new matter into the above-referenced application or necessitate an additional search. Further, the proposed amendment to independent claim 21 removes the last issue that remains for purposes of appeal.

In the event that the proposed amendment to independent claim 21 is not entered, its entry is respectfully requested upon the filing of a Notice of Appeal in the above-referenced application.

CONCLUSION

It is respectfully submitted that each of claims 1-21 and 23-44 is allowable. An early notice of the allowability of each of these claims is respectfully solicited, as is an indication that the above-referenced application has been passed for issuance. If any issues preventing allowance of the above-referenced application remain which might be resolved by way of a telephone conference, the Office is kindly invited to contact the undersigned attorney.

Respectfully submitted,



Brick G. Power
Registration No. 38,581
Attorney for Applicant
TRASKBRITT, PC
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

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